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## AIRGRAM

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SUMMARY: Franco-Soviet cooperation in science and technology is deemed a success by official sources within the government. Evaluation of the current state of play by those actually charged with carrying out cooperative programs and by informed outside observers suggests that organizational, human and policy problems make progress "slow and heavy." This airgram addresses the following issues:

## I. The Official View: An Evaluation

- A. Organization for Franco-Soviet Cooperation
- B. Commercial Implications of Cooperation
- C. Brief History of the Cooperation Program

## II. Lessons from the Working Level

- A. Human Factors
- B. Bureaucratic Problems of Cooperation
- C. Goals for Cooperation and Commercial Opportunities

## III. Conclusions

END SUMMARY.

I. THE OFFICIAL VIEW: AN EVALUATION

The GOF characterizes the overall results of Franco-Soviet scientific cooperation as "interesting and generally successful"; in private discussions, however, GOF officials stress the organizational and formal aspects of cooperation more than the substantive ones.

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A. Organization for Franco-Soviet Cooperation: At the time of de Gaulle's Moscow trip (1966) two principal organizations were created to monitor progress and manage the policy issues involved:

- La Grande Commission (formally the "Commission mixte permanente franco-soviétique"). Chaired jointly by the President of the State Committee for Science and Technology for the Soviet side and the French Minister for Economy and Finance (thereby reflecting the French desire that the decisions taken in the Grande Commission have a high economic and trade content), the Grande Commission meets annually, alternately in Moscow and in Paris. The Grande Commission's purview includes:
  - Management of the three "large sectors" (specialized areas of particular economic and scientific importance):
    - a) a common system of color television based on the French process SECAM,
    - b) space studies,
    - c) joint exploration of the peaceful uses of atomic energy.
  - Ratification of decisions taken by the Petite Commission.
  - In its policy role, the Grande Commission proposes major policy options to the two governments.
- La Petite Commission (formally the "Commission mixte franco-sociétique de coopération scientifique, technique et économique"). In its annual meetings, chaired jointly by the Vice-Chairman of the Soviet State Committee for Science and Technology and by the Director for Economic Affairs of the GOF's FonOff, the Petite Commission manages and examines the state of scientific cooperation in domains outside the large sectors.
- Various working groups have been created, primarily by the Petite Commission, to study problems in juridical and technical areas (patents, licenses, standards, metrology).
- To stimulate industrial cooperation a number of sectional groups (groupes sectoriels) have been formed to give French industrialists an opportunity to meet their Soviet counterparts. Official sources stress the commercial nature of the sectional groups, and note that

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interest in them on both sides has fluctuated widely.\*

B. Commercial Implications of Cooperation: GOF attitudes towards commercial contacts under the aegis of the cooperation program have varied over the years. At first seen as a primary vehicle for stimulating direct sales, the sectional groups have been the object of official vacillation. During the period 1969-1971 the GOF made strenuous efforts to interest private French manufacturers of goods with high technology content to participate in the sectional groups. The private sector's response was initially enthusiastic, but soon turned to disillusionment when French industry perceived that: 1) few ready markets for its goods existed in the Soviet scientific community, 2) in order to sell in the Soviet scientific market Western firms had to be prepared for negotiations over a much longer period of time than is the current practice in Europe, 3) bureaucratic rigidity within the Soviet Union precluded the use of visiting missions and virtually demanded the full-time presence of French representation.

While the sectional groups continue to exist, the GOF has no overall policy of seeking greater participation in them by French industry. In the view of Charles Maisonnier, FonOff Deputy Director of Scientific Affairs, the most important function currently served by the sectional groups is to give French industry some access to Soviet research and development. In a very few highly specialized programs (primarily computers) SCIATTS were told of energetic GOF attempts to enlist private sector participation, but such efforts appear to be the exception rather than the rule.

There are at least two other areas involved in the cooperation program in which GOF optimism about the possibility of sales to the Soviet Union appears more justified in the long term. In the large sectors (about which commercial information is very tightly held within the GOF and the participating companies), the color television process based on SECAM continues to receive a great deal of attention from the Grande Commission and from concerned private sector firms. While official expression of opinion is restrained, contacts familiar with the television program past history of missed deadlines, feel that French manufacturers may begin producing color TV sets for sale in Soviet markets in the 1978-79 period.

Government contacts believe that opportunities for direct sales may well exist in areas where the Soviet Union possesses great theoretical strength but little existing hardware. An example is a joint project in the field

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\*For additional information on the organization and official evaluation of Franco-Soviet cooperation, see "Scientific and Technological Cooperation with the Soviet Union: The French Experience," a paper delivered by Maurice Levy to the USIS-sponsored Strasburg symposium on "Russia and the West: Cultural Contacts and Influences", November 1, 1973.

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of teaching machines undertaken by the Academy of Sciences of Novosibirsk and the French Ministry of Industry's computer institute (I.R.I.A.). After preliminary meetings between representatives of the two concerned bodies, the Petite Commission was asked to approve a project in which the French would design and build the hardware and the Soviets would create the programming for a multi-level language teaching machine. After a delay of some seven months from the date on which the Petite Commission approved the project, both governments made appropriate funding arrangements; a team of French specialists has just returned from several weeks in Novosibirsk. Contacts familiar with I.R.I.A. point out that once the theoretical design work for the machine has been done, French manufacturers will be asked to produce first pilot models and then, after appropriate debugging, production models of the machines. The implication is that the GOF expects markets for these machines to open up in the Soviet Union.

Other fields in which GOF officials have pointed to potential marriages between Soviet theory and French production capability include hydraulic logic systems, oncology (tumor location), computer-driven chemical analyzers and micro wave landing systems.

C. Brief History of the Cooperation Program: In 1957 the GOF and the Soviet Union concluded a protocol on exchanges which resulted in little real scientific cooperation. It was not until General de Gaulle visited Moscow in 1966 and signed a general treaty of cooperation which made specific reference to more extended cultural, scientific and technological relationships that a true cooperation can be said to have begun. Perhaps the most important signal of the intent behind that program was the joint Franco-Soviet declaration (made during the de Gaulle visit) which created a permanent organization to manage and control Franco-Soviet scientific cooperation (see Section A above).

In the years which followed the number of ad hoc working arrangements grew rapidly and without much coordination. Thus, by 1971, both governments were ready to sign a "Program for Enlarging Franco-Soviet Cooperation in Scientific and Technical Fields for a Period of Ten Years" which envisioned joint planning bodies to outline the development of scientific, economic and industrial exchanges in the period 1973-1983.

## II. LESSONS FROM THE WORKING LEVEL

Although officially declared "generally successful" by the GOF, progress on the entire range of Franco-Soviet scientific cooperation (including the three large sectors) is characterized as "heavy and slow" both by several of those who actually carry out the programs and by knowledgeable observers (including journalists and academics). Most of our contacts felt that the GOF is far too concerned with making platitudinous annual declarations of progress while avoiding difficult decisions on such issues as technology

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transfer, common funding and systematic review of work priorities.

Other problems perceived by our contacts include those involving human factors, bureaucratic rigidity in the Soviet Union, differences in goals for cooperation and a lack of support for Franco-Soviet cooperation on the part of French private industry.

A. Human Factors: All observers noted a great need for patience in attempting to work on joint scientific research with Soviet specialists, and most cited numerous examples to support their contention. The French experience has been that Soviet counterparts tend to be characterized by a suspicious attitude, lack of cooperative spirit and an excessive reliance on bureaucratic formality until a "thawing out" (le dégel) has taken the form of an extensive cultivation of their Soviet colleagues which has gone far beyond what would be expected in a professional relationship in the West. One computer specialist mentioned going out to dinner with a soviet researcher almost nightly for six weeks before they began to develop a cooperative relationship in the laboratory.

The need for a thawing process exists on almost every level, in the large sectors as well as in less highly structured fields.\* Early efforts on joint research in microwave communications were stalled for months when Soviet experts sent to France were deemed sullen and uncooperative by French researchers. A series of dinners and parties was arranged and working relationships began to improve. Additional examples have been cited to SCIATTs by almost all sources.

For French specialists working in the Soviet Union the relative isolation of any Westerner in Russia is a factor in professional performance. All of the usual problems--separation from family, difficult and restricted travel opportunities, language barriers, culture shock--are exacerbated by any pressure from home agencies or companies to produce rapid results. One senior government official thought that technical specialists en mission to the Soviet Union had often suffered from the need of their parent agencies and companies to produce results justifying the extremely high expenses of working in the Soviet Union (often three to five times greater than equivalent costs would run in Western Europe). Yet, as one physicist and some journalists pointed out, with increasing experience in the Soviet Union most French government agencies and companies have come to accept a relatively slow pace of progress in the laboratory and in joint managerial committees.

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\*See for example Paris A-730 (October 26, 1973) which reported on a meeting of French and Soviet space experts in Corsica. GOF officials stated that a crucial factor in the success of their talks was an extensive French effort to create an informal, relaxed atmosphere.

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B. Bureaucratic Problems of Cooperation: Most observers noted that the Soviets prefer a centralized, highly detailed and rigidly channeled process for managing scientific cooperation. "A specific point of contact whose powers are clearly delimited and specified prior to beginning a joint project, and the designation of a single overall project manager with enough rank to take important substantive decisions and enough technical expertise to be acquainted with all phases of a joint project, are necessary pre-requisites for working with the Soviets," one private sector executive told SCIATT.

Even when reassured that proper bureaucratic channels have been created, at least at the beginning of a joint project, Soviet researchers tend to ask for the creation of intra-laboratory councils, daily staff meetings and other manifestations of bureaucratic man. Such pre-occupation with form tends to wither away, most observers agreed, after the thawing out has occurred. More difficult to resolve, however, are problems resulting from Soviet researchers' needs to be responsive to the needs of their home bureaucracies. The smallest decisions required for daily work are often stalled for days while approval is sought from the appropriate Soviet body. One chemist told of asking a Soviet colleague here in France to share expenses for laboratory flasks (about \$10 per person) only to be told that the Russian would have to clear the joint purchase with Moscow.\* A solution which has worked well for the French side has been the nomination of an administrator who works under the project manager and who is charged with dealing directly with a Soviet counterpart on the day-to-day administrative issues of a joint project. Such a working relationship, French observers feel, is conducive to building trust and avoiding bureaucratic formalism.

In terms of policy for a specific project, most observers feel that Soviet working level specialists would prefer to take decisions without involving their parent bureaucracies, but are only free to do so when detailed administrative arrangements have been made far ahead of time. A journalist commented that working with Soviet counterparts was often an exercise in the exegesis of a protocol or memorandum of understanding in order to prove that each step of the project had already received the blessing of a Soviet bureaucracy.

C. Goals for Cooperation and Commercial Opportunities: Almost all observers felt that the Soviet Union possessed unusual strength in the theoretical domains of several cooperative fields (examples cited to SCIATT included those drawn from nuclear chemistry, microbiology, physics, microwave electronics, computer studies, oncology, radio astronomy and pharmacology) while being relatively more primitive in equipment design and production. It would thus appear that a natural alliance of interests would link Soviet research laboratories to their more hardware-oriented French counterpart institutions. The

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\*See Paris 30025 for further examples and comment.

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French have been surprised to find that is not the case. In almost every discipline in question Soviet researchers have continued to stress attempts at enhancing the theory involved and have been reluctant to discuss possible gaps in Soviet hardware.

To the extent that French industry has been involved in cooperation, Soviet reluctance to focus on specific equipment needs has been a major source of frustration. During the period in which French industry was relatively more active in the sectional groups, many observers felt that a basic misunderstanding of goals and purposes existed between French and Soviet opposite numbers. French industrialists, knowing that the Soviet Union did not, in some cases, possess sufficiently sophisticated equipment, saw the sectional groups as allowing the French side to demonstrate and discuss specific equipment packages and, eventually, to make sales. "The result," one former French commercial attaché in Poland said, "was utter disaster. Our side felt that a natural affinity of interest was being blocked by a total lack of candor--the Soviets felt they were being hustled by a group of pitchmen."

This history helps to explain why Soviet specialists seem most comfortable in working with government institutes and semi-nationalized firms. Freed from an immediate need to produce an end-product, under no pressure to buy equipment, Soviet researchers seem more able to work in harmony with French counterparts.

III. CONCLUSIONS

With very few exceptions, most of our French contacts were relatively reticent and were far more willing to discuss the reasons for their reticence than the substance of Franco-Soviet cooperation. For private sector executives, US interest in Franco-Soviet cooperation is accurately perceived as the first step in launching a more extended US-Soviet cooperation program. Thus, with no exceptions, all of our contacts in the private sector were guarded in their statements. For government officials speaking unofficially, our interviews on Franco-Soviet cooperation were an opportunity to lay out a number of very strenuous objections to current USG policies (most notably in COCOM) and current US corporation practice (usually with reference to US firms which begin negotiations with Eastern European countries before seeking COCOM action).

Against this background, therefore, we believe that the comments made by our contacts take on a slight dog-in-the-manger air. While it is undoubtedly true that Franco-Soviet cooperation has developed more slowly than many would have liked, the French, particularly at the level of government institutes, have been able to gain much from their Soviet experience. Most sources agree that information management cooperation has been by far the most potentially useful to the French - their Soviet counterparts (primarily at Novosibirsk) have pioneered in the development of powerful algorithms which may have extensive uses in communications as many European ministries of posts and telecommunications attempt to convert their telephone networks from analogue to digital systems. While all of our

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contacts agree that this conversion is still many years away, they insist that once conversion is begun market positions will depend heavily on the programming and theoretical knowledge available.

In addition, we believe that the GOF may soon seek to reanimate the sectorial groups. While there is little hard evidence to support this conclusion, most of our observers tended to stress the notion that the past two years have been a learning period for both the GOF and French private industry. SCIATT interviews have produced the impression that the reasons which originally caused much vacillation on the part of both the GOF and the French private sector may now have been overcome - i.e., that the dégel may have taken place on an institutional level and at a sufficient degree of intensity to permit useful commercial contacts to be greatly expanded.

Finally, we believe that three great lessons from the French experience should not be lost on the US:

- 1) the need for patience - the understanding that the costs of cooperation and the benefits to be derived from cooperation are subject to different time factors when dealing with Soviet organizations;
- 2) the need for an organization sufficiently rigid to meet the Soviet need for bureaucratic precision (or, at least, the appearance of bureaucratic precision) and flexible enough to permit steady development of common goals and structures;
- 3) the need for a USG determination to assist US firms at all levels - policy, administration and point-of-representation - if the commercial aspects of cooperation are to move ahead in a satisfactory manner.

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